RESEARCH ARTICLE

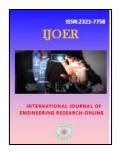# EMPLOYEE AUTHENTICATION AND MAINTENANCE SYSTEM USING BARCODE

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ABSTRACT

The rapid growth of android applications is created a great impact on our lives. The aim of this "Employee Authentication and Maintenance System Using Barcode (QR)" is to automate the employee monitoring process in company. This application improves the organizational growth of the company. In this system there are two parts, in first part, employee scan his QR based identity card and sever system enables some services like car parking slot allocation, canteen services, etc. In second part, employee scan his same unique QR code based identity card then attendance of employee will be marked in administrator database and start his personal computer with help of wake on LAN (WOL) protocol. Employee profile can be maintained in mobile android application. The basic aim of this system is to save time and work in better manner. It help employee to concentrate only on their duties. Also, it helps company or organization to grow their business efficiently.

Key Words-QR (Quick Response), WOL (Wake On LAN), LAN (Local Area Network).

I. Introduction

As we know in this modern world, time is very precious for the growth of the organization. In this system by using unique QR code based identity card, authorization as well as authentication will be done. Nowadays most of the people have android Smartphone so we developed one android application and with the help of this application employee scan use services like car parking, marking attendance and canteen schedule. On the basis of QR code based identity card employees personal computer will be started using wake on LAN (Local Area Network) protocol. This will help employees to save the time to start computer.

II. Existing System

In many institutions and organization the attendance plays curtail rol**e**. The previous approach in which manually taking attendance and maintain its records was very inconvenient task [4].

Another Approach is Biometric device, using biometric device like fingerprint scanner, in which fingerprint is capture by user interface, which is likely to be an optical, solid state or an ultrasound sensor. Generally, there are two approaches for fingerprint verification system among them first one is minutiae based technique, in which minutiae has represented by ending or termination. Another is imaging based method or matching pattern, which take account of global feature of any fingerprint image. This method is more useful than the first one because it solved some intractable problem of method one [5].

Considering these issues in mind we developed QR Code Based Effective Employee Maintenance System which automates the whole process of taking attendance.

III. proposed system

In QR code based effective employee maintenance system contains QR code scanning App. which is scanning the employee QR code identity card. In this system employee contain only one QR code based identity card which scans by QR Code scanning app. After scanning, the first QR code scanning app enables the two

functions such as car parking and canteen food. In the car parking function admin sends notification to the employee through the push server. In push server the notifications are sent with the help of Google cloud messaging. In canteen food function employee can able to see today's menu list.

Another QR code scanning App. is used to maintain some official data. After scanning the same QR code based identity card with QR code scanning App automatically employee attendance will be updated in admin database. Also, this system contains employee database. In employee database the employee profile is maintained and employee's personal computer will be started with the help of Wake on LAN (WOL).

QR code scanning App will enable in particular time period only. So using this method we can maintain the regularity of employee. After second time scanning, the QR code based identity card adding employee name to the present employee list which shows the currently present employee in the office.

IV. IMPLEMENTATION DETAILS

Module

Develop android application

- Develop an android application for the Admin and User panel.
- In admin panel will maintain employee attendance.
- Application provides various services to the employee such as car parking slot allocation, canteen menu, and absent list of employee.

Scanning the QR code

- Same QR code will be going to scan two times.
- After scanning the QR code first time employee will get services like car parking slot number and canteen menu.
- After scanning the QR code second time employee will get services like absent list of employee and attendance.

Sending notification

- In this system, notifications are sent to valid employee.
- In first part it will send notification of empty slot for car parking.

Start employee computer

- WOL enabled computers essentially wait for a magic packet to arrive includes the NIC's MAC address in it.
- Wake-on-LAN is an industry standard protocol for waked computers up from a very low power mode remotely.

V. CONCLUSIONS

In this system, we are implementing the new generation employee monitoring system to meet the organization requirements. Proposed system will help to minimize time required to search parking slots. Using this system, employee can concentrate on his work. With the help ofQR code, authentication can be done. In future, we will implement of module where admin can see ongoing user activities on client machine.

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